Widely tunable mid-IR femtosecond resonant radiation induced by self-defocusing solitons in a quadratic nonlinear medium

We experimentally observe widely tunable mid-IR femtosecond pulses by resonant radiation, generated by direct three-wave-mixing from a soliton in PPLN. The poling pitch gives a parametrically tunable resonant radiation, a feature absent in Kerr media.

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